Journal of Gerontology: BIOLOGICAL SCIENCES

Contents of Volume 54A

Volume 54A — **JANUARY 1999** — **Number 1**

Editorial ... *Jay Roberts* B3
Long-Term Calorie Restriction Reduces Energy Expenditure in Aging Monkeys ... *James P. DeLany, Barbara C. Hansen, Noni L. Bodkin, Judith Hannah, and George A. Bray* B5
Commentary ... *Rudolph L. Leibel* B12
Effects of Lifelong Moderate Caloric Restriction on Levels of Neuropeptide Y, Proopiomelanocortin, and Galanin mRNA ... *Teresa M. McShane, Melinda E. Wilson, and Phyllis M. Wise* B14
Myocardial Retinoid X Receptor, Thyroid Hormone Receptor, and Myosin Heavy Chain Gene Expression in the Rat During Adult Aging ... *Xilin Long, Marvin O. Bohnet, Lydia O'Neill, Jing-Sheng Zheng, Guimei Wa, Yu Ko Nitta, Michael T. Crow, and Edward G. Lakatta* B23
Commentary: Nuclear Receptors and Myosin Heavy Chain Gene Expression in the Aged Myocardium ... *Kenneth R. Boheler* B28
Application of Exogenously Regulatable Promotor Systems to Transgenic Models for the Study of Aging ... *William W. Morgan, Arlan Richardson, Z. Dave Sharp, and Christi A. Walter* B30
Commentary ... *S. Michal Jazwinski* B41
Instructions to Authors ... B43

Volume 54A — **FEBRUARY 1999** — **Number 2**

Protein Carbonyl Accumulation in Aging Dauer Formation-Defective (*daf*) Mutants of *Caenorhabditis elegans* ... *Kayo Yasuda, Hiroshi Adachi, Yoshisada Fujiwara, and Naoaki Ishii* B47
Commentary on "Protein Carbonyl Accumulation in Aging Dauer Formation-Defective (*daf*) Mutants of *Caenorhabditis elegans*" ... *Sataro Goto* B52
Age-Related Phenotypic Alterations in Populations of Purified Human Bone Precursor Cells ... *Michael W. Long, Elizabeth K. Ashcraft, Daniel Normalle, and Kenneth G. Mann* B54
Altered Movement Strategy Increases Lower Extremity Stiffness During Stepping Down in the Aged ... *Tibor Hortobágyi and Paul DeVita* B63
Lack of an Effect of Age on β-Adrenoceptor–Mediated Lipolysis in Isolated Human Adipocytes ... *John G. Gerber, Donna Detmar-Hanna, and Nancy R. Zahniser* B71
Aging Process Is Accompanied by Increase of Transglutaminase C ... *Sang Chul Park, Eui Ju Yoo, Jeong A. Han, Yong Chul Hwang, Jee Young Choi, Jeong Soo Park, Yong Hoon Park, Kyung Ok Kim, In-Gyu Kim, Sang Cheol Seong, and Sahng June Kwak* B78

Volume 54A — **MARCH 1999** — **Number 3**

Acknowledgments ... B87
Revisiting the Role of Fat Mass in the Life Extension Induced by Caloric Restriction ... *Nir Barzilai and Gaurav Gupta* B89
Commentary ... *Edward J. Masoro* B97
Author's Response to Commentary ... *Nir Barzilai* B98
Cross-Sectional and Longitudinal Analysis of Age-Associated Changes in Body Composition of Male Brown Norway Rats: Association of Serum Leptin Levels With Peripheral Adiposity ... *Tami Wolden-Hanson, Brett T. Marck, Lynna Smith, and Alvin M. Matsumoto* B99
Commentary: Leptin, Adipose Tissue and Aging—is There a Role for Testosterone? ... *John E. Morley, Horace M. Perry III, Richard P. Baumgartner, and Philip J. Garry* B108
Authors' Response to Commentary ... *Toni Wolden-Hanson and Alvin M. Matsumoto* B110
Altered IGF-I and IGFBPs in Senescent Male and Female Rats ... *Silvia Severgnini, David T. Lowenthal, William J. Millard, Frank A. Simmen, Brad H. Pollock, and Stephen E. Borst* B111
The Age-Dependent Cytokine Production by Murine $CD8^+$ T Cells as Determined by Four-Color Flow Cytometry Analysis ... *Xi Y. Mu and Marilyn L. Thoman* B116
Perception of Postural Limits in Elderly Nursing Home and Day Care Participants ... *Stephen N. Robinovitch and Terrence Cronin* B124
Commentary ... *Steven L. Wolf* B131
Instructions to Authors ... B133

Volume 54A — **APRIL 1999** — **Number 4**

Characterization of a Life-Extending Mutation in *age-2*, a New Aging Gene in *Caenorhabditis elegans* ... *Yulong Yang and David L. Wilson* B137
Activation of the Recombination Activating Gene 1 (RAG-1) Transcript in Bone Marrow of Senescent C57BL/6 Mice by Recombinant Interleukin-7 ... *Arie Ben Yehuda, Eytan Wirtheim, Ali Abdulhai, Reuven Or, Shimon Slavin, Sharona Babaey, and Gideon Friedman* B143
C4, BF, C3 Allele Distribution and Complement Activity in Healthy Aged People and Centenarians ... *Diego Bellavia, Giovanni Fradà, Diego Bellavia, Giovanni Fradà, Pietro Di Franco, Salvatore Feo, Claudio Franceschi, Paolo Sansoni, and Melchiorre Brai* B150
Impaired Cholera Toxin Relaxation With Age in Rat Aorta ... *Justin Chapman, William E. Schutzer, Val J. Watts, and Scott L. Mader* B154
Longitudinal and Cross-Sectional Analysis of HEALTH WATCH Data With a Subset of Perimenopausal Women and Matched Controls ... *Diane D. Peterson and Robert M. Schmidt* B160
Protein Glycosylation and Advanced Glycosylated Endproducts (AGEs) Accumulation: An Avian Solution? ... *Muhammad Iqbal, Lorraine L. Probert, Nabil H. Alhumadi, and Hillar Klandorf* B171
Commentary ... *Irma H. Ullrich, W. Guyton Hornsby, Robert Chetlin, and Rachel Yeater* B177
Instructions to Authors ... B179

Volume 54A — **MAY 1999** — **Number 5**

Age-Related Adipose Tissue mRNA Expression of ADD1/SREBP1, PPARγ, Lipoprotein Lipase, and GLUT4 Glucose Transporter in Rhesus Monkeys ... *Kikuko Hotta, Noni L. Bodkin, Thomas A. Gustafson, Shinji Yoshioka, Heidi K. Ortmeyer, and Barbara C. Hansen* B183
Commentary: Aging, Differentiation-Dependent Gene Expression, and Fat Cell Function ... *James L. Kirkland* B189
Authors' Response to Commentary ... *Kikuko Hotta, Noni L. Bodkin, Thomas A. Gustafson, Shinji Yoshioka, Heidi K. Ortmeyer, and Barbara C. Hansen* B191
The Effects of Nutritional Manipulation and Laboratory Selection on Lifespan in *Drosophila melanogaster* ... *Theodore J. Nusbaum and Michael R. Rose* B192
Effect of Aging and Dietary Restriction on Rat Testicular Germ Cell Apoptosis ... *Christopher J. Barnes, Benjamin W. Covington IV, and Makau Lee* B199

Commentary ... *Josefa Blanco-Rodríguez* B205
Muscle Quality and Age: Cross-Sectional and Longitudinal Comparisons ... *E. Jeffrey Metter, Nicole Lynch, Robin Conwit, Rosemary Lindle, Jordan Tobin, and Ben Hurley* B207
Differential Effects of Aging on Heart Rate Variability and Blood Pressure Variability ... *Laurence Fluckiger, Jean-Marc Boivin, Didier Quilliot, Claude Jeandel, and Faiez Zannad* B219
Commentary: Cardiovascular Oscillations: From a Physiological Curiosity to a Probe of Aging and Health? ... *Massimo Pagani* B225
Instructions to Authors ... B227

Volume 54A **JUNE 1999** **Number 6**

Interrelations of Age, Sensory Functions, and Human Brain Signal Processing ... *Christian F.A. Kügler* B231
Neural Mechanisms of Delirium: Current Hypotheses and Evolving Concepts ... *Jonathan M. Flacker and Lewis A. Lipsitz* B239
Dynamic Paradigms for Human Mortality and Aging ... *Kenneth G. Manton* B247
A View of the Aging-Disease Relationship From Age 85 ... *Herman T. Blumenthal* B255
Emerging Issues in Antibiotic Resistant Infections in Long-Term Care Facilities ... *Robert A. Bonomo and Louis B. Rice* B260

Volume 54A **JULY 1999** **Number 7**

Predictive Parameters of Joint Disease in DBA/1 Transgenic Mice ... *Saijai Cheunsuk, Eric Gerken, Gamal Osman, Leroy Hood, and Warren Ladiges* B271
Aminoguanidine Supplementation Delays the Onset of Senescence In Vitro in Dermal Fibroblast-Like Cells From Senescence-Accelerated Mice ... *Hiromi Fujisawa, Tomofumi Nishikawa, Bing-Hua Zhu, Yasumitsu Nishimura, Motoyuki Shimizu, Mitsutoshi Kimoto, Keiichi Higuchi, and Masanori Hosokawa* B276
Body Fat Distribution With Long-Term Dietary Restriction in Adult Male Rhesus Macaques ... *Ricki J. Colman, Jon J. Ramsey, Ellen B. Roecker, Thomas Havighurst, John C. Hudson, and Joseph W. Kemnitz* B283
The Effects of Peripheral Vascular Disease on Gait ... *Kevin McCully, Carol Leiper, Tiffany Sanders, and Elizabeth Griffin* B291
Commentary on "The Effects of Peripheral Vascular Disease on Gait" ... *Anne B. Newman* B295
Kleemeier Award Lecture: Are There Genes for Aging? ... *Richard A. Miller* B297
Instructions to Authors ... B308

Volume 54A **AUGUST 1999** **Number 8**

Regional Variation in Cardiac Myosin Isoforms of Female F344 Rats During Aging ... *Marvin O. Bohlyt, Steven T. Devor, Julie A. Opiteck, and Timothy P. White* B313
The Age-Related Accumulation of Protein Carbonyl in Rat Liver Correlates With the Age-Related Decline in Liver Proteolytic Activities ... *Simona Vittorini, Cristina Paradiso, Alessio Donati, Gabriella Cavallini, Matilde Masini, Zina Gori, Maria Pollera, and Ettore Bergamini* B318
Impaired Sensory Functioning in Elders: The Relation With Its Potential Determinants and Nutritional Intake ... *Nynke de Jong, Ina Mulder, Cees de Graaf, and Wija A. van Staveren* B324
Chemosensory Impairment and Appetite Commentary on "Impaired Sensory Functioning in Elders: The Relation With Its Potential Determinants and Nutritional Intake" ... *Susan S. Schiffman* B332
Authors' Response to Commentary ... *Nynke de Jong and Cees de Graaf* B334
Forever Young: Visual Functions Not Affected or Minimally Affected by Aging: A Review ... *Jay M. Enoch, John S. Werner, Gunilla Haegerstrom-Portnoy, Vasudevan Lakshminarayanan, and Maurice Rynders* B336
Changes in Postural Muscle Dynamics as a Function of Age ... *Robert P. Huang, Clinton T. Rubin, and Kenneth J. McLeod* B352
Announcement: Four-Way Cross Mouse Stocks: A New, Genetically Heterogeneous Resource for Aging Research ... *Richard A. Miller, David Burke, and Nancy Nadon* B358

Volume 54A **SEPTEMBER 1999** **Number 9**

Neuronal Loss in the Brainstem and Cerebellum-Part of the Normal Aging Process? A Morphometric Study of the Vermis Cerebelli and Inferior Olivary Nucleus ... *Martin Sjöbeck, Staffan Dahlén, and Elisabet Englund* B363
Potassium Depletion: Renal Membrane Lipid Metabolism and Na/H Exchanger Abundance in Aged F344 x BNF1 Rats ... *Somchit Eiam-Ong and Sandra Sabatini* B369
Age-Related Changes in a-Tocopherol Dynamics With Relation to Lipid Hydroperoxide Content and Fluidity of Rat Erythrocyte Membrane ... *Kiyotaka Yanagawa, Hiroshi Takeda, Toru Egashira, Kumiko Sakai, Masaru Takasaki, and Teruhiko Matsumiya* B379
Dietary Restriction Alters Retinol and Retinol-Binding Protein Metabolism in Aging Rats ... *Stéphanie Chevalier, William S. Blaner, Véronique Azais-Braesco,and Beatriz Tuchweber* B384
Effects of Age and Gender on the Cardiovascular Responses to Isoproterenol ... *Michael J. Turner, Constance M. Mier, Robert I. Spina, Kenneth B. Schechtman, and Ali A. Ehsani* B393
Commentary ... *John R. Stratton* B401

Volume 54A **OCTOBER 1999** **Number 10**

What Counts in Brain Aging? Design-Based Stereological Analysis of Cell Number ... *Jeffrey M. Long, Peter R. Mouton, Mathias Jucker, and Donald K. Ingram* B407
Induction of Tyrosine Hydroxylase and Neuropeptide Y by Carbachol: Modulation With Age ... *Nihal Tümer, Christopher S. Broxson, Jeffrey S. LaRochelle, and Philip J. Scarpace* B418
Mortality Oscillations Induced by Periodic Starvation Alter Sex-Mortality Differentials in Mediterranean Fruit Flies ... *James R. Carey, Pablo Liedo, Hans-Georg Müller, Jane-Ling Wang, and Jeng-Min Chiou* B424
Extended Longevity Lines of *Drosophila melanogaster*: Characterization of Oocyte Stages and Ovariole Numbers as a Function of Age and Diet ... *Kimberly A. Carlson and Lawrence G. Harshman* B432
Effects of Food Restriction on Mechanical Properties of Arterial System in Adult and Middle-Aged Rats ... *Kuo-Chu Chang, Chai-Yee Chow, Ying-I Peng, Tong-J Chen, and Yuan-Feen Tsai* B441
The Effect of Aging on Skeletal Muscle Capillarization in a Murine Model ... *Yvonne S. Davidson, John E. Clague, Michael A. Horan, and Neil Pendleton* B448
Slowed Muscle Contractile Properties Are Not Associated With a Decreased EMG/Force Relationship in Older Humans ... *Alexander V. Ng Alexander V. Ng and Jane A. Kent-Braun* B452
Instructions to Authors ... B459

Volume 54A NOVEMBER 1999 Number 11

Editor's Note . . . . . *Jay Roberts* B463
Biomarkers of Aging . . . . . *Richard L. Sprott* B464
Lesion Biomarkers of Aging in B6C3F1 Hybrid Mice . . . . . *R. D. Lipman, G. E. Dallal, and R. T. Bronson* B466
Effects of Genotype and Diet on Age-Related Lesions in Ad Libitum Fed and Calorie-Restricted F344, BN, and BNF3F1 Rats . . . . . *R. D. Lipman, G. E. Dallal, and R. T. Bronson* B478
Growth Curves and Survival Characteristics of the Animals Used in the Biomarkers of Aging Program . . . . . *Angelo Turturro, William W. Witt, Sherry Lewis, Bruce S. Hass, Ruth D. Lipman, and Ronald W. Hart* B492
The Relationships of Animal Age and Caloric Intake to Cellular Replication In Vivo and In Vitro: A Review . . *Norman S. Wolf and William R. Pendergrass* B502

Volume 54A DECEMBER 1999 Number 12

Pleiotropic Effects of Growth Hormone and Insulin-like Growth Factor (IGE)-1 on Biological Aging: Inferences From Moderate Caloric-Restricted Animals . . . . . *William E. Sonntag, Colleen D. Lynch, William T. Cefalu, Rhonda L. Ingram, Sean A. Bennett, Phillip L. Thornton, and Amir S. Khan* B521
Age-Associated Impairment in Brain MAPK Signal Pathways and the Effect of Caloric Restriction in Fischer 344 Rats . . . . *Xuechu Zhen, Kunihiro Uryu, Guoping Cai, Gerard P. Johnson, and Eitan Friedman* B539
Behavioral Biomarkers of Aging: Illustration of a Multivariate Approach for Detecting Age-Related Behavioral Changes . . . . . *Alicja L. Markowska and Steven J. Breckler* B549
Volume Contents and Index B567

Journal of Gerontology: MEDICAL SCIENCES

Contents of Volume 54A

Volume 54A — JANUARY 1999 — Number 1

Are Performance-Based Measures Sufficiently Reliable for Use in Multicenter Trials? . . . *Alan M. Jette, Diane U. Jette, Jennifer Ng, Diane J. Plotkin, Mark A. Bach, and The Musculoskeletal Impairment (MSI) Study Group* M3
Functional Reach Improvement in Normal Older Women After Alexander Technique Instruction . . . *Ronald J. Dennis* M8
Serum Anticholinergic Activity Changes With Acute Illness in Elderly Medical Patients . . . *Jonathan M. Flacker and Lewis A. Lipsitz* M12
Effects of Age and Gender on Cardiovascular Responses to Phenylephrine . . . *Michael J. Turner, Constance M. Mier, Robert J. Spina, and Ali A. Ehsani* M17
Characteristics of the SAGE Database: A New Resource for Research on Outcomes in Long-Term Care . . . *Roberto Bernabei, Giovanni Gambassi, Kate Lapane, Antonio Sgadari, Francesco Landi, Constantine Gatsonis, Lewis Lipsitz, and Vincent Mor on behalf of the SAGE Study Group* M25
Communication Between Older Adults and Their Physicians About Urinary Incontinence . . . *Stuart J. Cohen, Deirdre Robinson, Elizabeth Dugan, George Howard, Patricia K. Suggs, Katherine F. Pearce, Dena D. Carroll, Paul McGann, and John Preisser* M34
Risk Factors for Falls in Hospitalized Older Medical Patients . . . *Leung-Wing Chu, Conrad KW Pei, Alice Chiu, Karen Liu, Mary ML Chu, Stephen Wong, and Alan Wong* M38
Age and Gender Differences in Single-Step Recovery From a Forward Fall . . . *Laura A. Wojcik, Darryl G. Thelen, Albert B. Schultz, James A. Ashton-Miller, and Neil B. Alexander* M44
Instructions to Authors . . . M51

Volume 54A — FEBRUARY 1999 — Number 2

Utility of Fever and Leukocytosis in Acute Surgical Abdomens in Octogenarians and Beyond . . . *Fred E. Potts IV and Larry F. Vukov* M55
Relationship Between the Response to Influenza Vaccination and the Nutritional Status in Institutionalized Elderly Subjects . . . *Tamàs Fülöp Jr., J. Richard Wagner, Abdelouahed Khalil, John Weber, Lise Trottier, and Hélène Payette* M59
The Rate of Decline in Function in Alzheimer's Disease and Other Dementias . . . *Arnold B. Mitnitski, Janice E. Graham, Alexander J. Morgilner, and Kenneth Rockwood* M65
Measurement of Body Fat in Healthy Elderly Men: A Comparison of Methods . . . *Giovanni Ravaglia, Paola Forti, Fabiola Maioli, Federica Boschi, Annalena Cicognani, and Giovanni Gasbarrini* M70
Disease, Disability, and Age in Cognitively Intact Seniors: Results From the Canadian Study of Health and Aging . . . *David B. Hogan, Erika M. Ebly, and Tak S. Fung* M77
Use of an Ambulation Assistive Devise Predicts Functional Decline Associated With Hospitalization . . . *Jane E. Mahoney, Mark A. Sager, and Muhammad Jalaluddin* M83
Phase-Dependent Modulation of Proximal and Distal Postural Responses to Slips in Young and Older Adults . . *Pei-Fang Tang and Marjorie H. Woollacott* M89
The Sex and Age of Older Adults Influence the Outcome of Induced Trips . . . . . *Michael J. Pavol, Tammy M. Owings, Kevin T. Foley, and Mark D. Grabiner* M103

Volume 54A — MARCH 1999 — Number 3

Thyroid Hormones: Positive Relationships With Cognition in Healthy, Euthyroid Older Men . . . *Patricia N. Prinz, James M. Scanlan, Peter P. Vitaliano, Karen E. Moe, Soo Borson, Bert Toivola, George R. Merriam, Lawrence H. Larsen, and H. Lester Reed* M111
Long-Term Efficacy of Nonsurgical Urinary Incontinence Treatment in Elderly Women . . . . *Michael W. Weinberger, Brian M. Goodman, and Molly Carnes* M117
Sensory Organization for Balance: Specific Deficits in Alzheimer's but not in Parkinson's Disease . . . . . *Raymond K. Y. Chong, Fay B. Horak, Jim Frank, and Jeffrey Kaye* M122
Postural Set for Balance Control is Normal in Alzheimer's but not in Parkinson's Disease . . . . *Raymond K. Y. Chong, Christine L. Jones, and Fay B. Horak* M129
Do Respiratory Symptoms Predict Chronic Airflow Obstruction and Bronchial Hyperresponsiveness in Older Adults? . . . . . *Deborah S. Renwick and Martin J. Connolly* M136
Effects of Age on Balance Assessment Using Voluntary and Involuntary Step Tasks . . . . . *Carl W. Luchies, Dennis Wallace, Ryan Pazdur, Sarah Young, and Alice J. DeYoung* M140
Adult Ontogeny of Rat Working Memory of Social Interactions . . . . . *George Taylor, Susan Farr, Mike Griffin, William Humphrey, and Jürgen Weiss* M145
Cognitive Impairment and Depression Predict Mortality in Medically Ill Older Adults . . . . . *Cynthia L. Arfken, Peter A. Lichtenberg, and Manuel E. Tancer* M152
Contribution of Psychosis and Depression to Behavioral Disturbances in Geropsychiatric Inpatients With Dementia . . . . . *Mark E. Kunik, A. Lynn Snow-Turek, Nayyar Iqbal, Victor A. Molinari, Claudia A. Orengo, Richard H. Workman, and Stuary C. Yudofsky* M157
Instructions to Authors . . . M162

Volume 54A — APRIL 1999 — Number 4

Attentional Demands and Postural Recovery: The Effects of Aging . . . *Lesley A. Brown, Anne Shumway-Cook, and Marjorie H. Woollacott* M165
Coimpairments: Strength and Balance as Predictors of Severe Walking Disability . . . *Taina Rantanen, Jack M. Guralnik, Luigi Ferrucci, Suzanne Leveille, and Linda P. Fried* M172
The Effects of Circumferential Wrist Pressure on Reproduction Accuracy of Wrist Placement in Healthy Young and Elderly Adults . . . *Mitchell Batavia, John G. Gianutsos, Wen Ling, and Arthur J. Nelson* M177
The Effects of High-Intensity and Low-Intensity Cycle Ergometry in Older Adults With Knee Osteoarthritis . . . *Kathleen Kline Mangione, Kevin McCully, Alyson Gloviak, Isabella Lefebvre, Mary Hofmann, and Rebecca Craik* M184
Dimensionality of Parkinsonian Signs in Aging and Alzheimer's Disease . . . *David A. Bennett, Kathleen M. Shannon, Laurel A. Beckett, and Robert S. Wilson* M191
Quality of Life and Parkinson's Disease . . . *Patricia A. Koplas, Heidi B. Gans, Mary P. Wisely, Maggie Kuchibhatla, Toni M. Cutson, Deborah T. Gold, Carrie T. Taylor, and Margaret Schenkman* M197
Older Drivers and Cataract: Driving Habits and Crash Risk . . . *Cynthia Owsley, Beth Stalvey, Jennifer Wells, and Michael E. Sloane* M203
Chronic Stress Associated With Spousal Caregiving of Patients With Alzheimer's Dementia Is Associated With Downregulation of B-Lymphocyte GH mRNA . . . *Hong Wu, Juan Wang, John T. Cacioppo, Ron Glaser, Janice K. Kiecolt-Glaser, and William B. Malarkey* M212

Volume 54A — MAY 1999 — Number 5

Aging Alteration of Cardiac Vagosympathetic Balance Assessed Through the Tone-Entropy Analysis . . . . . *Eiichi Oida, Toshiko Kannagi, Toshio Moritani, and Yukio Yamori* M219
Nursing Home Resident Use of Care Directives . . . *Daesman N. Suri, Brian L. Egleston, Jacob A. Brody, and Mark A. Rudberg* M225
Reported and Measured Physical Functioning in Older Inner-City Diabetic African Americans . . . . . *Douglas K. Miller, Li-Yung Lily Lui, Horace M. Perry III, Fran E. Kaiser, and John E. Morley* M230
Sexual Function in 1,202 Aging Males: Differentiating Aspects . . . *Walter M. Bortz II, Douglas H. Wallace, and Diana Wiley* M237

Exercise: Effects on Physical Functional Performance in Independent Older Adults . . . . . *M. Elaine Cress, David M. Buchner, Kent A. Questad, Peter C. Esselman, Barbara J. deLateur, and Robert S. Schwartz* M242
Older Adults Exhibit a Reduced Ability to Fully Activate Their Biceps Brachii Muscle . . . . . *Guang H. Yue, Vinoth K. Ranganathan, Vlodek Siemionow, Jing Z. Liu, and Vinod Sahgal* M249
The Risk of Hospitalization for Acute Myocardial Infarction Among Older Adults . . . . . *Fredric D. Wolinsky, Kathleen W. Wyrwich, Simon C. Jung, and James G. Gurney* M254
Preexisting Medical Conditions in Adult Day Services: An Examination of Nonmetropolitan and Metropolitan Admissions . . . . . *Shirley S. Travis and William J. (Jim) McAuley* M262
Hospitalization and Alzheimer's Disease: Results From a Community-Based Study . . . . . *Steven M. Albert, Rosann Costa, Carol Merchant, Scott Small, Robert A. Jenders, and Yaakov Stern* M267

Volume 54A **JUNE 1999** **Number 6**

Efficacy of Calcium Supplements on Bone Mass in Postmenopausal Women . . . . . *Kit Mui Chiu* M275
Effect of Facilitation of Sensation From Plantar Foot-Surface Boundaries on Postural Stabilization in Young and Older Adults . . . . . *Brian E. Maki, Stephen D. Perry, Robert G. Norrie, and William E. McIlroy* M281
A Cross-Cultural Comparison of Neuromuscular Performance, Functional Status, and Falls Between Japanese and White Women . . . . . *James W. Davis, Michael C. Nevitt, Richard D. Wasnich, and Philip D. Ross* M288
Past and Current Smoking in Relation to Body Fat Distribution in Older Men and Women . . . . . *Marjolein Visser, Lenore J. Launer, Paul Deurenberg, and Dorly J.H. Deeg* M293
Prevalence and Severity of Urinary Incontinence in Older African American and Caucasian Women . . . . . *Nancy H. Fultz, A. Regula Herzog, Trivellore E. Raghunathan, Robert B. Wallace, and Ananias C. Diokno* M299
Preserved Blood Pressure and Heart Rate Circadian Rhythm in Early Stage Alzheimer's Disease . . . . . *Pietro Cugini, Maria C. Gori, Carlo M. Petrangeli, Paolo Tisei, and Franco Giubilei* M304
Commentary: Chronomes: Time Structures Within the Physiological Range Identify Early Disease Risk Aiming at Primary Prevention . . . . . *Franz Halberg and Germaine Cornélissen* M309
A Neuropathological Study of Dementia in Nursing Homes in Shimane Prefecture, Japan:Evaluation of the Age and Gender Effect . . . . . *Haruo Seno, Hiroshi Ishino, Takuji Inagaki, Masaaki Iijima, Koichi Kaku, Toshiyuki Inata, and Makoto Hirai* M312
Description of a Mixed Ethnic, Elderly Population. I. Demography, Nutrient/Energy Intakes, and Income Status . . . . . *Johnnie W. Prothro and Christine A. Rosenbloom* M315
Description of a Mixed Ethnic, Elderly Population. II. Food Group Behavior and Related Nonfood Characteristics . . . . . *Johnnie W. Prothro and Christine A. Rosenbloom* M325
Description of a Mixed Ethnic, Elderly Population. III. Special Diets, Food Preferences, and Medicinal Intakes . . . . . *Johnnie W. Prothro and Christine A. Rosenbloom* M329

Volume 54A **JULY 1999** **Number 7**

Spinal-Flexibility-Plus-Aerobic Versus Aerobic-Only Training: Effects of a Randomized Clinical Trial on Function in At-Risk Older Adults . . . . . *Miriam C. Morey, Margaret Schenkman, Stephanie A. Studenski, Julie M. Chandler, Gail M. Crowley, Robert J. Sullivan, Jr., Carl F. Pieper, Martha E. Doyle, Michael B. Higginbotham, Ronnie D. Horner, Helga MacAller, Carmel M. Puglisi, Kenneth G. Morris, and Morris Weinberger* M335
Reliability of Foot Trajectory Measures Within and Between Testing Sessions . . . . . *Gregory M. Karst, Patricia A. Hageman, Thomas F. Jones, and Scott H. Bunner* M343
Anxiety in Alzheimer's Disease: Prevalence and Comorbidity . . . . *Linda Teri, Louise E. Ferretti, Laura E. Gibbons, Rebecca G. Logsdon, Susan M. McCurry, Walter A. Kukull, Wayne C. McCormick, James D. Bowen, and Eric B. Larson* M348
Peak Aerobic Power Is an Important Component of Physical Performance in Older Women . . . . . *Ellen F. Binder, Stanley J. Birge, Robert Spina, Ali A. Ehsani, Marybeth Brown, David R. Sinacore, and Wendy M. Kohrt* M353
A High Plasma Concentration of TNF-α Is Associated With Dementia in Centenarians . . . . . *Helle Bruunsgaard, Karen Andersen-Ranberg, Bernard Jeune, Agnes N. Pedersen, Peter Skinhøj, and Bente Klarlund Pedersen* M357
Nursing Home Admission for African Americans With Alzheimer's Disease . . . . . *Susan C. Miller, Thomas R. Prohaska, and Sylvia E. Furner* M365
Does Religious Attendance Prolong Survival? A Six-Year Follow-Up Study of 3,968 Older Adults . . . . . *Harold G. Koenig, Judith C. Hays, David B. Larson, Linda K. George, Harvey Jay Cohen, Michael E. McCullough, Keith G. Meador, and Dan G. Blazer* M370
The Combined Effects of Baseline Vulnerability and Acute Hospital Events on the Development of Functional Dependence Among Community-Living Older Persons . . . . . *Thomas M. Gill, Christianna S. Williams, and Mary E. Tinetti* M377
Instructions to Authors M384

Volume 54A **AUGUST 1999** **Number 8**

The Effectiveness of Acupressure in Improving the Quality of Sleep of Institutionalized Residents . . . . . *Mei-Li Chen, Li-Chan Lin, Shiao-Chi Wu, and Jaung-Geng Lin* M389
Oral Arginine Does Not Stimulate Basal or Augment Exercise-Induced GH Secretion in Either Young or Old Adults . . . . . *Taylor J. Marcell, Dennis R. Taaffe, Steve A. Hawkins, Kyle M. Tarpenning, Gysla Pyka, Lynn Kohlmeier, Robert A. Wiswell, and Robert Marcus* M395
Helicobacter Antibodies in Finnish Centenarians . . . . . *Leena Rehnberg-Laiho, Jukka Louhija, Hilpi Rautelin, Jasminka Jusufovic, Reijo Tilvis, Aaro Miettinen, and Timo U. Kosunen* M400
Does Old Age or Parkinson's Disease Cause Bradyphrenia? . . . . . *James G. Phillips, Tanya Schiffter, Michael E. R. Nicholls, John L. Bradshaw, Robert Iansek, and Lauren L. Saling* M404
New and Worsening Conditions and Change in Physical and Cognitive Performance During Weekly Evaluations Over 6 Months: The Women's Health and Aging Study . . . . . *Jack M. Guralnik, Luigi Ferrucci, Brenda W.J.H Penninx, Judith D. Kasper, Suzanne G. Leveille, Karen Bandeen-Roche, and Linda P. Fried* M410
Prevalence and Correlates of Physician Recommendations To Exercise Among Older Adults . . . . . *Teresa M. Damush, Anita L. Stewart, Kris M. Mills, Abby C. King, and Philip L. Ritter* M423
The Relation Between Psychometric Test Performance and Physical Performance in Older Adults . . . . . *Ellen F. Binder, Martha Storandt, and Stanley J. Birge* M428

Volume 54A **SEPTEMBER 1999** **Number 9**

Life Stress, Mood Disturbance, and Elevated Interleukin-6 in Healthy Older Women . . . . . *Susan K. Lutgendorf, Linda Garand, Kathleen C. Buckwalter, Toni Tripp Reimer, Sue-Young Hong, and David M. Lubaroff* M434
Weight Loss and Mortality Among Free-Living Frail Elders: A Prospective Study . . . . . *Hélène Payette, Carole Coulombe, Véronique Boutier, and Katherine Gray-Donald* M440
Implications of Body Fat Distribution in an Older Twin Population . . . . . *Tracy L. Nelson, George P. Vogler, Nancy L. Pedersen, and Yuling Hong* M446
The Inability of Hormone Replacement Therapy or Chronic Running to Maintain Bone Mass in Master Athletes . . . . . *Steven A. Hawkins, Robert A. Wiswell, S. Victoria Jaque, Nora Constantino, Taylor J. Marcell, Kyle M. Tarpenning, E. Todd Schroeder, and Daniel M. Hyslop* M451
Measuring Accumulated Health-Related Benefits of Exercise Participation for Older Adults:The Vitality Plus Scale . . . . . *Anita M. Myers, Olga W. Malott, Elana Gray, Catrine Tudor-Locke, Nancy A. Ecclestone, Sandra O'Brien Cousins, and Robert Petrella* M456

Serum Concentrations of Steroids, Parathyroid Hormone, and Calcitonin in Postmenopausal Women During the Year Following Hip Fracture: Effect of Location of Fracture and Age . . . . . *Norman H. Dubin, Lauren K. Monahan, Janet A. Yu-Yahiro, Roger H. Michael, Sheryl I. Zimmerman, William Hawkes, J. Richard Hebel, Kathleen M. Fox, and Jay Magaziner* M467

Temporal and Regional Variation in the Use of Breast-Conserving Surgery and Radiotherapy for Older Women With Early-Stage Breast Cancer From 1983 to 1995 . . . . . *Xianglin Du, Jean L. Freeman, Daniel H. Freeman, Dorothy A. Syblik, and James S. Goodwin* M474

Elevated Salivary Cortisol in the Evening in Healthy Elderly Men and Women: CorrelationWith Bone Mineral Density . . . . . *Hershel Raff, Jonathan L. Raff, Edmund H. Duthie, Charles R. Wilson, Edward A. Sasse, Inge Rudman, and Dale Mattson* M479

Volume 54A OCTOBER 1999 Number 10

Low Back Pain and Disability in Older Women: Independent Association With Difficulty But Not Inability to Perform Daily Activities . . . . . *Suzanne G. Leveille, Jack M. Guralnik, Marc Hochberg, Rosemarie Hirsch, Luigi Ferrucci, Jean Langlois, Taina Rantanen, and Shari Ling* M487

Nursing Rehabilitation and Exercise Strategies in the Nursing Home . . . . . *John N. Morris, Maria Fiatarone, Dan K. Kiely, Pauline Belleville-Taylor, Katharine Murphy, Steven Littlehale, Wee Lock Ooi, Evelyn O'Neill, and Nancy Doyle* M494

The Contribution of Chronic Conditions and Disabilities to Poor Self-Rated Health in Elderly Men . . . . . *Nancy Hoeymans, Edith J.M. Feskens, Daan Kromhout,and Geertrudis A.M. van den Bos* M501

Age-Related Changes in Rate and Magnitude of Ankle Torque Development: Implications for Balance Control . . . . . *Courtney D. Hall, Marjorie H. Woollacott, and Jody L. Jensen* M507

Postdischarge Medication Use of Elderly Cardiac Patients From Urban and Rural Locations . . . . . *Cheryl Dellasega, Denise Orwig, Frank Ahern, and Elizabeth Lenz* M514

Effects Of Functional Status Changes Before and During Hospitalization on Nursing Home Admission of Older Adults . . . . . *Richard H. Fortinsky, Kenneth E. Covinsky, Robert M. Palmer, and C. Seth Landefeld* M521

Antidepressant Use in the Elderly Population in Canada: Results From a National Survey . . . . . *Stephen C. Newman and Ahmed I. Hassan* M527

Instructions to Authors M531

Volume 54A NOVEMBER 1999 Number 11

The Clock Drawing Test: Utility for Dementia Detection in Multiethnic Elders . . . . . *Soo Borson, Michael Brush, Eric Gil, James Scanlan, Peter Vitaliano, Jim Chen, Judy Cashman, Mary M. Sta Maria, Ross Barnhart, and Jose Roques* M534

Effects of an Oral Glucose Challenge on Free Radicals/Antioxidants Balance in an Older Population With Type II Diabetes . . . . . *Daniel Tessier, Abdelouahed Khalil, and Tamas Fülöp* M541

Scaling ADLs Within the MDS . . . . . *John N. Morris, Brant E. Fries, and Shirley A. Morris* M546

Causes of Death and Clinical Diagnostic Errors in Extreme Aged Hospitalized People: A Retrospective Clinical-Necropsy Survey . . . . . *Paolo Bordin, Paolo G. Da Col, Paolo Peruzzo, Giorgio Stanta, Jack M. Guralnik, and Luigi Cattin* M554

Factors Associated With Brain Donation Among Optimally Healthy Elderly People . . . . . *Jeffrey A. Kaye, Alison Dame, Suzanne Lehman, and Gary Sexton* M560

Self-Rated Health as a Risk Factor for Prescribed Drug Use and Future Health and Social Service Use in Older People . . . . . *Peter A. Bath* M565

Does Syndrome X Exist in Hypertensive Elderly Persons With Impaired Glycemic Control? . . . . . *Karen C. Johnson, Marshall J. Graney, William B. Applegate, Abbas E. Kitabchi, John W. Runyan, and Gale H. Rutan* M571

Psychopathology and Emotional Distress Among Older High-Utilizing Health Maintenance Organization Patients . . . . . *Leonard J. Haas, David C. Spendlove, Michael P. Silver, and Trent C. Holmberg* M577

Gait Characteristics as Risk Factors for Falling From Trips Induced in Older Adults . . . . . *Michael J. Pavol, Tammy M. Owings, Kevin T. Foley, and Mark D. Grabiner* M583

Changes in Power With Resistance Training in Older and Younger Men and Women . . . . . *A. C. Jozsi, W. W. Campbell, L. Joseph, S. L. Davey, and W. J. Evans* M591

Volume 54A DECEMBER 1999 Number 12

Effect of Age on Plasma Membrane Asymmetry and Membrane Fluidity in Human Leukocytes and Platelets . . . . . *J. M. Noble, T. H. Thomas, and G. A. Ford* M601

Geropsychological Problems in Medical Rehabilitation: Dementia and Depression Among Stroke and Lower Extremity Fracture Patients . . . . . *Benjamin T. Mast, Susan E. MacNeill, and Peter A. Lichtenberg* M607

Disability Fingerprints: Patterns of Disability in Spinal Cord Injury and Multiple Sclerosis Differ . . . . . *Helen Hoening, Lauren McIntyre, Jennifer Hoff, Gregory Samsa, and Laurence G. Branch* M613

A Randomized Outcome Evaluation of Group Exercise Programs in Long-Term Care Institutions . . . . . *Darien-Alexis Lazowski, Nancy A. Ecclestone, Anita M. Myers, Donald H. Paterson, Catrine Tudor-Locke, Clara Fitzgerald, Gareth Jones, Norihiro Shima, and David A. Cunningham* M621

Tai Chi Practice Reduces Movement Force Variability for Seniors . . . . . *Jin H. Yan* M629

Intertrochanteric Versus Femoral Neck Hip Fractures: Differential Characteristics, Treatment, and Sequelae . . . . . *Kathleen M. Fox, Jay Magaziner, J. Richard Hebel, John E. Kenzora, and T. Michael Kashner* M635

An Individualized Approach to Outcome Measurement in Geriatric Rehabilitation . . . . . *Paul Stolee, Karen Stadnyk, Anita M. Meyers, and Kenneth Rockwood* M641

Volume Contents and Index M648